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ABSTRACT

Presented is a listing of books recommended by the Mathematical Association of the United Kingdom that deal with mathematics education background and reference. The following information on each book is provided: author; title; publisher; cost to the nearest pound; categories of use; and a code that indicates if the book in question is out of print, reprinted, and/or highly recommended. Brief annotations are provided with many of the entries. (MP)

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BOOKLISTS

For the Teaching of Mathematics in Schools

BACKGROUND and REFERENCE

(REF: B&R)

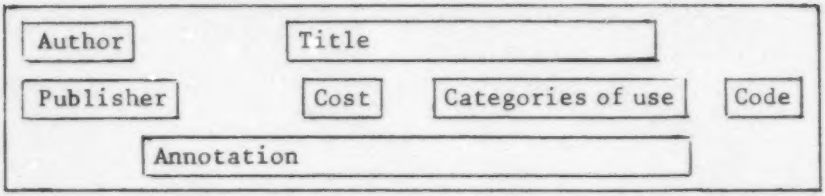
prepared by a sub-committee
of the Teaching Committee
of the
Mathematical Association

THE MATHEMATICAL ASSOCIATION

May 1980

SE 035 593

Information on each book is displayed in the following format:



Cost Given to the nearest £ above.

Code Symbols

* Highly recommended.

O Out of Print.

R Reprinting.

Categories of use

A Applications - to science, geography, economics.....
B Background and reference books for teachers.
C Content - mathematical topics (not above 1st year University level).
E Mathematical Education - eg. for 'Diploma' students.
J/K Primary school teachers (4-11 yrs)/and pupils.
L/M Lower secondary school teachers (11-16)/and pupils.
P/Q Practical and constructional work, books for teachers/pupils.
T Teaching method.
U/V Sixth-form teachers/and pupils.
Z Puzzles, problems, games and recreational mathematics.

Details of lists available are shown outside back cover.

PREFACE

The lists have been prepared by a sub-committee of Teaching Committee, and edited by F.R. Watson. A data-processing program written by Dr. K.H. Bennett (University of Keele) was used to extract the sublists and print them alphabetically.

Very many people have contributed to the production of these lists, in a variety of ways. In particular, thanks are due to the staff of the Education Library and of the Computer Centre, University of Keele, and to the members of the sub-committee, and many others who supplied information and comments.

It is intended to up-date the lists at fairly frequent intervals. We cannot hope to have avoided all errors and your suggestions are invited; they will help to improve the lists.

Comments on the lists, or notification of errors and omissions will be welcomed. Please address correspondence to the Secretary, Booklists Sub-committee, c/o Mathematical Association, 259 London Road, Leicester.

F.R.W.

May 1980

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ABBOTT, E.A. FLATLAND.
BLACKWELL, 3RD EDN., 1950. 3 BLMUV
+ (CLASSIC; IMAGINATIVE ACCOUNT OF WORLD OF 2, 1, AND 4 DIMENSIONS, WRITTEN 1880'S).

ADLER, I. PROBABILITY AND STATISTICS FOR EVERYMAN.
DOBSON,1963. BJLU
+ (G365)

ADLER, I. THE NEW MATHEMATICS.
DOBSON, 1964. BELUV
+ (EARLY POPULAR APPROACH, CLEAR, BUT DATED)

ALEKSANDROV, A.D.,ET AL MATHEMATICS. ITS CONTENT, METHOD AND MEANING (3 VOLS).
M.I.T.PRESS, 1969. BC *
+ (INTRO. TO MODERN HIGHER MATHS; TRANSLATED FROM RUSSIAN)

ALEXANDROFF, P.S. INTRODUCTION TO THE THEORY OF GROUPS.
BLACKIE,1961. BCUV 0
+ (G370)

ALLEN, R.G.D. BASIC MATHEMATICS.
MACMILLAN, 1965 3 BCUV
(G361 SERVICE TEXT BY A MATHEMATICAL ECONOMIST - ALGEBRA, ANALYSIS AND SOME GEOMETRY. UNDERGRADUATE LEVEL)

ANDERSON, I. A FIRST COURSE IN COMBINATORIAL MATHEMATICS.
OUP, 1974. 3 BCUV
+ (G405, READABLE INTRODUCTION, PP. 123)

ANDREE, R.V. SELECTIONS FROM MODERN ABSTRACT ALGEBRA.
CONSTABLE,1958. CU
+ (A FIRST COURSE)

ANDREWS, J.G.& MCLONE R.R., EDS. MATHEMATICAL MODELLING.
BUTTERWORTHS, 1976. 4 ABCU *
+ (G418, CASE STUDIES - ABOUT USING SPECIFIC MODELS, RATHER THAN THE PROCESS OF MODELLING, PP. 260)

APOSTOL, T. SELECTED PAPERS ON PRECALCULUS MATHEMATICS.
MATHEMATICAL ASSOCIATION OF AMERICA, 1977. BLMUV *
+ (G423, ARTICLES FROM AMERICAN MATHEMATICAL MONTHLY, AND MATHEMATICS MAGAZINE PP. 469)

APOSTOL, T. SELECTED PAPERS IN CALCULUS.
MATHEMATICAL ASSOCIATION OF AMERICA, 1969. BCUV
+

ARMITAGE, J.V. AND GRIFFITHS A COMPANION TO ADVANCED MATHEMATICS I
H.B.
CUP, 1969. BCUV
+ (HANDBOOK FOR SMP A LEVEL - BACKGROUND FOR ALGEBRA AND ANALYSIS.
NOT EASY READING)

ATKIN, R.H. MATHEMATICS AND WAVE MECHANICS.
HEINEMANN, 1964 ABCU
+

ATM MATHEMATICAL REFLECTIONS.
CUP. 2 BELTUV O
+ (ESSAYS IN MEMORY OF G. SILLITOE; FULL OF VARIED GEOMETRICAL
IDEAS, PP. 244)

BAKER,L., WELLS, STEPHENS, CHILDSPLAY MATHEMATICS
FIELKER
EVANS, 1975. 2 PQJBEZT *
+ (GAMES, OPEN SITUATIONS)

BALL, W.W. & COXETER, H.S.M. MATHEMATICAL RECREATIONS AND ESSAYS.
MACMILLAN, 12TH ED., 1974. 3 BUVZ *O
+ (G409, CLASSIC COLLECTION, REPEATEDLY REVISED PP. 428)

BARR, S. EXPERIMENTS IN TOPOLOGY.
MURRAY, 1965. BLMPUVQ *O
+ (PRACTICAL ACTIVITY AND FASCINATING DIALOGUE)

BATTERSBY, A. MATHEMATICS IN MANAGEMENT.
PENGUIN, 1966. 1+ ABLUV *
+ (G380, USEFUL GUIDE OPERATIONAL RESEARCH PP.256)

BECKENBACH, E. & BELLMAN, R. AN INTRODUCTION TO INEQUALITIES
MATHEMATICAL ASSOCIATION OF AMERICA LMUVC *
+

BELL, A.W. ALGEBRAIC STRUCTURE.
ALLEN AND UNWIN. UVC
+ (NUMBER SYSTEMS, GROUPS, FIELDS ; 6 FORM AND COLLEGE)

BELL, A.W. AND FLETCHER, T.J. — SYMMETRY GROUPS. MATHEMATICS TEACHING PAMPHLET NO.12.
A.T.M., 1964. BCLUV
+ (STRIP AND WALLPAPER PATTERNS)

BELL, E.T. — MEN OF MATHEMATICS. VOLS I,II.
PENGUIN, 1953. BHUV *
+ (DETAILED BIOGRAPHIES OF MAJOR MATHEMATICIANS)

BELL, E.T. — THE DEVELOPMENT OF MATHEMATICS.
MCGRAW-HILL, 1945. 14 BH
+

BELL, E.T. — MATHEMATICS, QUEEN AND SERVANT OF SCIENCE.
BELL, 1952. BHLUV O
+

BELL, HUGHES AND ROGERS — AREA, WEIGHT AND VOLUME
NELSON, 1975 3 PJCET
+ (MONITORING AND ENCOURAGING CHILDREN'S CONCEPTUAL DEVELOPMENT)

BENDICK, J. AND OTHERS — MATHEMATICS ILLUSTRATED DICTIONARY.
KAYE & WARD WITH HICKS, SMITH. 1965 Z BHM
+ (MIS 4,1 DEFINITIONS,EXPLANATIONS,POTTED BIBLIOGRAPHIES; SIMPLE LANGUAGE,GENEROUSLY ILLUSTRATED)

BERGAMINI, D. — MATHEMATICS.
TIME-LIFE INTERNATIONAL, 1969. 14 BHLMUV *
+ (G391, POPULAR HISTORICAL ACCOUNT, PP. 189)

BIRKHOFF, G.& MACLANE, S.A. — A SURVEY OF MODERN ALGEBRA.
COLLIER-MACMILLAN, 4TH ED., 1977. 11 CU *
+ (G419, CLASSIC RECENTLY REVISED, COVERS MOST UNDERGRADUATE TOPICS, PP. 500)

BIRKHOFF, G.D. AND BEATLEY, R. — BASIC GEOMETRY.
CHELSEA, 3RD EDITION, 1940. 3 LBT
+ (TRADITIONAL EUCLIDEAN GEOMETRY MADE RIGOROUS AND INTERESTING, PP294)

BLUMENTHAL, L.M. — A MODERN VIEW OF GEOMETRY.
FREEMAN, 1961. BCU O
+ (AXIOMATIC AFFINE AND PROJECTIVE DEVELOPMENT LEADING TO EUCLIDEAN AND NON-EUCLIDEAN GEOMETRY; CONTAINS A GOOD HISTORICAL CHAPTER)

BOLTYANSKII, V.G. EQUIVALENT AND EQUIDECOMPOSABLE FIGURES.
HARRAP. CUVZ
+

BONOLA, R. NON-EUCLIDEAN GEOMETRY.
DOVER, 1954. 4 CH
+ (THOROUGH, RIGOROUS INTRODUCTION, INCLUDING TRANSLATIONS OF BOLYAI AND LOBACHEVSKI)

BOON, F.C. A COMPANION TO ELEMENTARY SCHOOL MATHEMATICS.
LONGMANS, 1960 BLUV 0
+ (FIRST PUBLISHED 1924 - BACKGROUND TO TRADITIONAL A LEVEL. STILL HAS MATERIAL NOT AVAILABLE ELSEWHERE)

BOWDEN, F.P.& TABOR,D. FRICTION AND LUBRICATION.
CHAPMAN AND HALL, 1956. BCUV *0
+ (PHYSICAL REALITIES UNDERLYING LAWS OF FRICTION)

BOWMAN, H.E. ROMANCE IN ARITHMETIC.
UNIV. OF LONDON PRESS, 1969. BHJKLHUV 0
+ (SIMPLE READABLE ACCOUNT OF HISTORY OF MEASURES)

BRADFORD, M.G. AND KENT, W.A. HUMAN GEOGRAPHY, THEORIES AND THEIR APPLICATIONS
OUP, 1977 ABCLUV
+ (SOME MATHEMATICAL MODELS USED IN GEOGRAPHY PP180)

BRADIS, V.M.ET AL LAPSES IN MATHEMATICAL REASONING.
PERGAMON, 1963. BUZ 0
+

BRANFIELD, J.R. AND BELL, A.W. MATRICES AND THEIR APPLICATIONS.
MACMILLAN, 1970. 3 BUV
+ (MIS 4,3, 6TH FORM APPROACH - INCLUDES MARKOV CHAINS AND QUADRATIC FORMS)

BULMER, M. G. PRINCIPLES OF STATISTICS
OLIVER AND BOYD CUV
+

BUNT, L.N.H.,ET AL. THE HISTORICAL ROOTS OF ELEMENTARY MATHEMATICS.
PRENTICE-HALL, 1976. BHJLU
+ (ARITHMETIC,ALGEBRA,GEOMETRY,NUMBER SYSTEMS DERIVED FROM THEIR SOURCES, PP300)

BURKHARDT, H. SEVEN SEVENS ARE FIFTY? - MATHEMATICS FOR THE REAL WORLD: INAUGURAL LECTURE.
SHELL CENTRE FOR MATHEMATICAL EDUCATION, UNIVERSITY OF NOTTINGHAM. ABLUE
+

BURKILL, J.C. A FIRST COURSE IN MATHEMATICAL ANALYSIS.
CAMBRIDGE, 1962 4 C
+ (STANDARD UNDERGRADUATE TEXT, SOLID, CLASSICAL)

BURKILL, J. C. ORDINARY DIFFERENTIAL EQUATIONS
OLIVER & BOYD, 1956. C
+

BURN, R.P. DEDUCTIVE TRANSFORMATION GEOMETRY.
CUP, 1975 7 BCU
+ (G413, AXIOMATIC TREATMENT WHICH DOES NOT USE REAL NUMBER SYSTEM, PP. 121)

CAMERON, A.J. MATHEMATICAL ENTERPRISES FOR SCHOOLS.
PERGAMON, 1966. BJLMPQ
+

CAMPBELL, R.C.. STATISTICS FOR BIOLOGISTS.
CUP, 2ND EDN. 1974. 5 ABUV
+ (G405, USEFUL FOR TEACHERS, REQUIRES MINIMAL MATHEMATICAL BACKGROUND, PP. 385)

CARTER, D.C.,ED. TOPICS IN MATHEMATICS: SOME IDEAS FOR THE SECONDARY CLASSROOM
BELL & HYMAN, 1979 4 BCELTU *
+ (FROM MATH. GAZETTE)

CARTER, D.C. AND WAIN, G.T., EDS. REFERENCES OF USE TO TEACHERS OF MATHEMATICS. VOL 1 AND SUPPLEMENT 1
CENTRE FOR STUDIES IN SCIENCE EDUCATION, U. OF LEEDS. 1975,1979. BEJLTU *
+ (COMPREHENSIVE, FROM JOURNALS)

CHAPMAN, L.R.,ED. THE PROCESS OF LEARNING MATHEMATICS.
PERGAMON, 1972 8 BEJLTUV
+ (G399, MIS 2,1 COLLECTED B.ED. LECTURES, PP. 392)

CHELLINGSWORTH, W. MATHS FOR CIRCUITS.
MACMILLAN, 1964. ACU O
+

CLARKE, G.M. & COOKE, D. A BASIC COURSE IN STATISTICS
ARNOLD, 1978. 7 UVBC *
+ (G423, TEXT FOR A LEVEL AND BEYOND; PRACTICAL APPLICATIONS ARE STRESSED BUT THEORY IS WELL AND CAREFULLY EXPLAINED; LOTS OF EXERCISES, PP. 368)

COHN, P.M. LINEAR EQUATIONS
ROUTLEDGE AND KEGAN PAUL, 1958. 1 CUV
+ (SHORT INTRODUCTION TO LINEAR ALGEBRA, FOR UNDERGRADUATES, PP. 75)

COHN, P.M. SOLID GEOMETRY.
ROUTLEDGE AND KEGAN PAUL 2 BCUV
+ (BRIEF INTRODUCTION)

COLLINGS, S. THEORETICAL STATISTICS-BASIC IDEAS.BOOKS 1 &2.
TRANSWORLD. 1,1 CUV 0
+ (G411, MIS 2,3, TEXT, A LEVEL +, PP. 92,148)

CONGRIDGE J.T.,ED. COUNT ME IN.
THE QUEEN ANNE PRESS LTD., 1968. BEJLTUV
+ (ESSAYS, VARIOUS AUTHORS, NUMERACY IN EDUCATION AND WORK)

COMMITTEE ON THE UNDER-GRADUATE PROGRAM IN MATHEMATICS (MAA) A BASIC LIBRARY LIST FOR FOUR-YEAR COLLEGES
MATHEMATICAL ASSOCIATION OF AMERICA 4 BCEU
+ (NUCLEUS FOR LIBRARY HOLDINGS IN US COLLEGES)

CONTE, S.D.& DE BOOR,C. ELEMENTARY NUMERICAL ANALYSIS:AN ALGORITHMIC APPROACH.
MCGRAW-HILL KOZAKUSHA, 1973. 6 UVC
+

COSRIMS THE MATHEMATICAL SCIENCES.
M.I.T.PRESS, 1969. 5+ BUV *
+ (ESSAYS BY U.S. AUTHORS - MODERN RESEARCH AND APPLICATIONS)

COURANT, R.& ROBBINS, H. WHAT IS MATHEMATICS?
OXFORD, 1941. 9 BCEU *
+ (READABLE INTRODUCTION TO IDEAS AND CONCEPTS AT UNDERGRADUATE LEVEL)

COXETER, H.S.M. INTRODUCTION TO GEOMETRY.
WILEY, 2ND EDN. 1969. 15 CUV *
+ (CLASSIC SUMMARY - LOOKS HARDER THAN IT IS; AN EXCELLENT SURVEY OF SYMMETRY).

COXETER, H.S.M. REGULAR POLYTOPES.
COLLIER-MACMILLAN, 1963. C D
+ (OLD, BUT STANDARD; AN ADVANCED TEXT ON SYMMETRY IN HIGHER DIMENSIONS

CRANK, J. MATHEMATICS AND INDUSTRY.
OXFORD, 2ND EDN., 1975 16 ABCLUV
+

CROSSLEY, J.N.,ET AL. WHAT IS MATHEMATICAL LOGIC?
OUP, 1972. 2 CUV
+ (G403, BASED ON MELBOURNE LECTURE SERIES, PP.82)

CUNDY, H.M. & ROLLET, A.P. MATHEMATICAL MODELS.
OXFORD, 2ND EDN., 1973 3 BJLMPQUV *
+ (G358,MIS2,3, CLASSIC TREATMENT OF MODELS AND MODEL-MAKING, PP. 286)

CURTIS LINEAR ALGEBRA, AN INTRODUCTORY APPROACH
ALLYN AND BACON,1974,3RD ED. 9 CA
+ (INCLUDES DETAILED DISCUSSION OF SOME APPLICATIONS)

DAISH, C.B. THE PHYSICS OF BALL GAMES.
ENGLISH UNIV.PRESS. 3+ ABCUV *D
+ (G401,PP180)

DAVENPORT, H THE HIGHER ARITHMETIC. AN INTRODUCTION TO THE THEORY OF NUMBERS
HUTCHINSON 1962 (2ND ED.) 1+ UVC
+ (G. XXX, LUCID, CONCISE, SELF-CONTAINED ACCOUNT OF CLASSICAL THEORY, PP 172)

DAVID, F. N. GAMES, GODS AND GAMBLING
GRIFFIN, 1969. 3 BHUV
+ (EXAMPLES FROM THE HISTORY OF PROBABILITY AND STATISTICS, PP.275)

DAVIS, P.J. THE LORE OF LARGE NUMBERS.
RANDOM HOUSE. BLMUV
+

DICKINSON, G.C. STATISTICAL MAPPING AND THE PRESENTATION OF STATISTICS
EDWARD ARNOLD,1963,1ST ED 2 U V B C E A
+ (A WIDE VARIETY OF GOOD AND BAD WAYS OF PRESENTING DATA)

DIENES, Z.P.(TRS. SEABORNE) THE SIX STAGES IN THE PROCESS OF LEARNING MATHEMATICS.
NFER, 1973 1 BEJLTU
+ (G405,MIS3,4 THOUGHT PROVOKING,PP54)

DIXON, C. NUMERICAL ANALYSIS.
BLACKIE & CHAMBERS. 3 CUV
+

DONCASTER L.E.A. PRIMARY MATHEMATICS
GLOBE 4 BEJT
+ (PRIMARY TEACHERS' GUIDE)

DORRIE, H. 100 GREAT PROBLEMS OF ELEMENTARY MATHEMATICS.
DOVER, 1965. 3 BUVZ *
+

DURELL, C.V. READABLE RELATIVITY.
BELL. BUV O
+ (OLD POPULARISATION - STILL OF INTEREST)

DYNKIN, E.B.& USPENSKII, V.A. RANDOM WALKS.
HEATH (EUROSPAN,LONDON WC2) CUV
+

DYNKIN, E.B.&USPENSKII,V.A. MULTICOLOR PROBLEMS.
HEATH (EUROSPAN,LONDON WC2) CUVZ *
+ (STEADY PROGRESS THROUGH THE 2 AND 3-COLOUR PROBLEMS; EXCELLENT FOR INDEPENDENT STUDY BY THE ABLE PUPIL)

EHRENBERG, A.S.C. DATA REDUCTION.
WILEY, 1975. 5 ABTU
+ (UNUSUAL APPROACH TO BASIC STATISTICS BUT GOES QUITE FAR)

ELLIS, A. AND TREEBY, T. ALGEBRAIC STRUCTURE.
MURRAY,1974. 2 CUV *
+ (BRIEF BUT FAIRLY DIFFICULT INTRODUCTION TO ABSTRACT ALGEBRA)

ELLIS, L. E. ET AL COMPUTERS & THE TEACHING OF NUMERICAL MATHEMATICS.
MATHEMATICAL ASSOCIATION, 1971. BU *
+

ESCHER, M. C. THE GRAPHIC WORK OF M. C. ESCHER.
OLDBOURNE PRESS. 1961. BJKLMUVZ *
+ (GOOD REPRODUCTIONS, SOME IN COLOUR, OF ESCHER'S WORK; NO ANALYSIS)

EVES, H. A SURVEY OF GEOMETRY, I, II.
ALLYN & BACON, 1963. BHUV *
+ (THOROUGH; VOL I SYNTHETIC, VOL II ANALYTIC)

EVES, H. W. & NEWSON, C. V. INTRODUCTION TO THE FOUNDATIONS AND FUNDAMENTAL CONCEPTS OF MATHEMATICS
HOLT, RINEHART AND WINSTON BC
+

FADIMAN, C. FANTASIA MATHEMATICA.
SIMON AND SCHUSTER 1958 B *
+

FADIMAN, C. THE MATHEMATICAL MAGPIE.
SIMON AND SCHUSTER 1964 B *
+

FAGG, S.V. DIFFERENTIAL EQUATIONS.
HODDER AND STOUGHTON 2 BCUV
+ (FAIRLY STANDARD, MAINLY TECHNIQUE, 1ST, 2ND ORDER; 6TH FORM OR UGRAD)

FEATHER, N. MASS, LENGTH, AND TIME.
PENGUIN. BUV *O
+

FELLER, W. INTRODUCTION TO PROBABILITY THEORY, VOL I
WILEY, 1950. CU *
+

FITZGERALD, B. P. DEVELOPMENTS IN GEOGRAPHICAL METHOD.
OUP, 1974. 2 ABUV
+ (MIS4, I APPLICATIONS OF STATISTICS AND TRANSFORMATIONS OF SPACE)

FLETCHER, H., HOWELL, A.H. AND WALKER, R. MATHEMATICS FOR SCHOOLS: TEACHERS' RESOURCE BOOKS
ADDISON WESLEY 1970-79 4 JLBET *
+ (LEVEL I (INFANTS) ONE VOL., LEVEL II (JUNIOR-MIDDLE) FIVE VOLS.)

FLETCHER, H. AND HOWELL, A. A. MATHEMATICS WITH UNDERSTANDING (2 VOLS).
PERGAMON, 1970. 4,7 BEJLT
+ (CONTENT AND APPROACH AT PRIMARY LEVEL)

FLETCHER, T. J. LINEAR ALGEBRA THROUGH ITS APPLICATIONS.
VAN NOSTRAND, 1972. CUV *O
+ (EXCELLENT INTRODUCTION -GETS DIFFICULT AT END; APPLICATIONS TO GEOMETRY, PHYSICS, STATISTICS, ETC. FAMILIARITY WITH MECHANICS NEEDED FOR SOME SECTIONS.)

FLETCHER, T.J., ED. SOME LESSONS IN MATHEMATICS.
CUP 8 BELTU *
+ (INDISPENSIBLE - ONE OF THE CLASSICS OF MODERN MATHEMATICS; CHAPTER 10 IS AN EXCELLENT ACCOUNT OF REFLECTION GEOMETRY)

FOWLER, D. INTRODUCING REAL ANALYSIS
TRANSWORLD STUDENT LIBRARY, 1973 BU
+ (AN EXCELLENT BOOK FOR READING BETWEEN U6 & UNIVERSITY, PP 125)

FREUND, J.E. MODERN ELEMENTARY STATISTICS
PRENTICE-HALL, 5TH EDN., 1979 6 CU
+ (PP 480)

GOODSTEIN, R.L. FUNDAMENTAL CONCEPTS OF MATHEMATICS.
PERGAMON, 2ND EDN., 1979 7 CUV
+

GREGG, C.V. NOMOGRAMS.
MATHEMATICAL PIE, 1959. BUV
+

GRIFFITHS, H.B. SURFACES.
CUP. 5 CUV
+ (G412, VERY EASY BEGINNING, VERY HARD END; PP120)

GRIFFITHS H.B. AND HILTON, P.J.A. COMPREHENSIVE TEXTBOOK OF CLASSICAL MATHEMATICS.
VAN NOSTRAND, 1970. BCU 0
+ (MODERN AND ADVANCED; UNIVERSITY LEVEL)

GRIFFITHS H.B. AND HOWSON A.G. MATHEMATICS: SOCIETY & CURRICULA.
CUP., 1974. BELU *
+ (MIS 3,6; STANDARD REFERENCE; FORCES INFLUENCING CURRICULUM)

H.M. INSPECTORATE MATHEMATICS, SCIENCE AND MODERN LANGUAGES ... AN APPRAISAL
DEPARTMENT OF EDUCATION AND SCIENCE, 1976 ETB
+

H.M.S.O. TIME MEASUREMENT.
HMSO. B
+

HABER, A. AND RUNYON, R. P. GENERAL STATISTICS
ADDISON-WESLEY 1973 L U Y C E
+ (OPEN UNIVERSITY TEXTBOOK. COMPREHENSIVE ON APPLICATIONS. NOT HIGHLY MATHEMATICAL)

HAGGETT, P. AND CHORLEY, R. NETWORK ANALYSIS IN HUMAN GEOGRAPHY.
D.
ARNOLD, 1969. 3 ACU
+ (UNIVERSITY GEOGRAPHERS' TEXT)

HALL, F. M. AN INTRODUCTION TO ABSTRACT ALGEBRA, VOL.I
C U P.1966 2 U C
+ (GOOD 6TH FORM AND FIRST YEAR UNIVERSITY LEVEL)

HALLERBERG, A. HISTORICAL TOPICS FOR THE MATHEMATICS CLASSROOM, (31ST YEAR BOOK)
NCTM, 1969. BEHJLTU
+ (RECOMMENDED, PP524)

HERSTEIN, I. N. TOPICS IN ALGEBRA.
BLAISDELL, 1964. CUV
+ (FORMAL APPROACH TO ABSTRACT ALGEBRA - ADVANCED)

HILBERT, D. AND COHN-VOSSEN, GEOMETRY AND THE IMAGINATION.
S.
CHELSEA, 1956. 6 BCUV
+ (WORTH DIPPING INTO: SUBSTANTIAL VISUAL STUDY OF PROJECTION, INCIDENCE ,TOPOLOGY PP358

HIRST, K. E. AND RHODES, F. CONCEPTUAL MODELS IN MATHEMATICS.
ALLEN & UNWIN, 1971. 3 CU
+ (SETS,LOGIC,PROBABILITY,1ST YR UNIV)

HUDSON, E. W. ET AL SQUARING THE CIRCLE AND OTHER MONOGRAPHS.4 VOLS.
CHELSEA, 1958. 7 HUVB
+ (SECT.1 IS HISTORICAL,HIGH-POWERED DISCUSSION OF 'PI', 2 IS RULER AND COMPASSES(HUDSON), 3 IS NON-DIFFERENTIABLE FUNCTIONS (SINGH), 4 IS LINKAGES (KEMPE)).

HODGE, S. E. AND SEED, M. L. STATISTICS AND PROBABILITY.
BLACKIEAND CHAMBERS, 1978. 3 CUV
+ (6TH FORM TEXT OF SMG;COVERS MOST OF STATISTICS REQUIRED FOR A-LEVEL)

HOEL, P.G. INTRODUCTION TO MATHEMATICAL STATISTICS.
WILEY,1971. 7 BCU
+

HOGBEN, L. MAN MUST MEASURE
RATHBONE EB
+

HOGBEN, L. MATHEMATICS IN THE MAKING.
MACDONALD, 1960. BHJKLMUV
+

HOGBEN, L. MATHEMATICS FOR THE MILLION.
ALLEN AND UNWIN 6 BHJLUV
+ (AN OLD FAVOURITE,STILL VALUABLE)

HOLLAND, J.M. STUDIES IN STRUCTURE.
MACMILLAN, 1972. 2+ CUV *R
+ (G400,TO GROUPS THROUGH ISOMORPHISMS; INCLUDES APPLICATIONS,PP235)

HOLT, M. AND MARJORAM, D. T. MATHEMATICS IN A CHANGING WORLD.
E.
HEINEMANN ED., 1973. ABLUV O
+ (G403,MIS 3,4,000 SELECTION OF APPLICATIONS - SCIENCE,ECONOMICS
GEOGRAPHY :GOOD ON PRACTICAL USES;PP293)

HOLT, M. J. AND MCINTOSH, A. THE SCOPE OF MATHEMATICS.
J.
OUP,1966. BJLUV
+ (LITTLE OUTDATED,BUT GOOD COVERAGE OF LOW LEVEL APPLICATIONS;
NON-SPECIALIST SIXTH FORMS,INCLUDES HISTORY,STRUCTURE AND LOGIC, MODELLIN

HONSBERGER, R. MATHEMATICAL GEMS I,II.
MATHEMATICS ASSOCIATION OF AMERICA 1973, BCUV *
1076.
+ (G407,417 UNUSUAL AND FASCINATING,PP176,182)

HOWSON, A.G.,ED. DEVELOPMENTS IN MATHEMATICAL EDUCATION.
PROCEEDINGS.I.C.M.E.
CUP. 5 BEJLTU
+ (G404 MIS 3,1,INCLUDES PAPERS BY PIAGET,FREUDENTHAL,THOM,PP318)

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PENGUIN. BLUV O
+ (STIMULATING - CONTINUOUS CREATION THEORY)

HUFF, D. HOW TO TAKE A CHANCE.
PENGUIN. 1 BLMUV *
+ (LIGHT-HEARTED)

HUFF, D. HOW TO LIE WITH STATISTICS.
GOLLANCZ, 1954. BJLMUV *
+ (GIVES EXAMPLES OF FALSE/MISLEADING DATA PRESENTATION; ELEMENTARY, AMUSING AND INSTRUCTIVE)

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(G410, 6TH FORM TEXT OF SMG, PP245)

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+ (G393, PP181)

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HEINEMANN, 1963 AHB *
+ (FULL OF HISTORICAL AND BIOGRAPHICAL ARTICLES; ENGINEERING IN BROADEST SENSE)

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+ (PP 529, 634 ILLUSTRATIONS)

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+ (G418, PP509)

JEGER M. TRANSFORMATION GEOMETRY.
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+ (ANALYSIS OF TRANSFORMATIONS, NOT THE GOEMETRY - ISOMETRIES, ENLARGEMENTS SIMILARITIES - 1ST YR. GRAD. LEVEL)

JEGER M. AND RUEFF M. SETS AND BOOLEAN ALGEBRA.
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+ (SETS AND USE IN PROBABILITY AND CIRCUIT THEORY)

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+

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◆ (FOR US BIOLOGY AND SOCIAL SCIENCE UNDERGRADUATES)

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◆ (PP 139)

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DOVER, 1939. BCEHTU *O
◆ (*COMPULSORY READING FOR ANY SERIOUS 6 FORM TEACHER - STILL I* VOL 1 THE BETTER OF THE TWO - THE GEOMETRY IN VOL 2 IS HEAVIER GOING)

KLEIN, F. ET AL. FAMOUS PROBLEMS OF ELEMENTARY GEOMETRY, AND OTHER MONOGRAPHS (4 VOLS IN 1)
CHELSEA. 2 CHLU
◆ (SQUARING THE CIRCLE, DOUBLING THE CUBE AND TRISECTING ANGLES (KLEIN) OTHER VOLS ARE SHEPPARD - FROM DETERMINANT TO TENSOR, MACMAHON - COMBINATORY ANALYSIS, MORDELL - 3 LECTURES ON FERMAT'S LAST THEOREM. SEPARATE VOLS. ARE OUT OF PRINT).

KLINE, M. MATHEMATICS IN THE MODERN WORLD.
FREEMAN, 1968. ADEHUV *
◆ (50 READINGS FROM SCIENTIFIC AMERICAN)

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◆ (G403, MIS 3,4, EXHAUSTIVE, AUTHORITATIVE HISTORY, PP1238)

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◆ (LAYMAN'S INTRODUCTION)

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◆ (G399, USEFUL REFERENCE)

KNUTH, D.E. SURREAL NUMBERS.
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+ (NOVELETTE, PP 119)

KORNER, S. THE PHILOSOPHY OF MATHEMATICS
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+ (DIFFICULT - BUT THE MOST READABLE)

KOROVKIN, P.P. INEQUALITIES
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+

KRAITCHIK, M. MATHEMATICAL RECREATIONS.
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LAKATOS, I PROOFS AND REFUTATIONS: THE LOGIC OF MATHEMATICAL DISCOVERY
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+ (G416 A COLLECTION OF PAPERS - INCLUDES HIS PAPER ON THE EULER POLYHEDRON THEOREM, FIRST PUBLISHED IN BJ PHIL. SCI.

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+ (G418, PP164)

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+ (WRITTEN AT ELEMENTARY LEVEL FOR PRIMARY TEACHERS)

LAWRENCE, J.D. A CATALOG OF SPECIAL PLANE CURVES.
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+ (G402, REFERENCE ONLY, BUT EXCELLENT, PP218)

LEDERMANN, W. COMPLEX NUMBERS.
ROUTLEDGE. 2 CUV
+

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+ (G412)

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NORTON, NEW YORK, 1944. B
+

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+ (POETIC INTRODUCTION TO ANALYSIS)

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+ (TRANS. FROM GERMAN, VERY READABLE INSTRUCTION, PP169)

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+ (G425, FULL OF MODERN NON-SCIENTIFIC APPLICATIONS, PP431)

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+ (SCHOOLS COUNCIL "CRITICAL REVIEW" PROJECT)

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HUTCHINSON, 1966. BCUV
+

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METHUEN, 1957. BUV *0
+

LOCKWOOD, E.H. A BOOK OF CURVES
CUP, 1961. 11 BUMPUV *
+ (G360, ONE NEW CURVE DISCUSSED EVERY 2 PAGES)

LOCKWOOD, E.H. & MACMILLAN, R. GEOMETRIC SYMMETRY.
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+ (G425, MIS8.3, PP228)

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MURRAY, 1978. 5 JBETP *
+ (MATHS GUIDE)

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OUP, 1964. CUV 0
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MACGILLAVRY, C.H. SYMMETRY ASPECTS OF ESCHER'S PERIODIC DRAWINGS.
BOHN, SCHELTEMA AND HOLKEMA, UTRECHT, BZU *
2ND EDN., 1976
+ (ESCHER'S PICTURES USED TO PRODUCE TESSELATIONS; ANALYSIS PROVIDED)

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+ (TOUGH GOING, BUT STILL A CLASSIC IN THE PHILOSOPHY OF SCIENCE)

MAINWARING, JAMES AN INTRODUCTION TO THE STUDY OF MAP PROJECTION
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+

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+ (G410, MATHS, IN ARCHITECTURE - MANY UNEXPECTED APPLICATIONS, THE
FORMAL GEOMETRY IS SUBSTANTIAL, PP360)

MATHEMATICAL ASSOCIATION REPORTS ON THE TEACHING OF....(VARIOUS TITLES)
BELL BELTU *
+ (REPORTS ON GEOMETRY(1951),ARITHMETIC(1952,64),MECHANICS(1950,65),
ANALYSIS(1970)A-LEVEL PROBABILITY AND STATISTICS(1975),11-16
1974),SIXTH-FORM NON-SPECIALISTS,ALGEBRA(1951,57),CALCULUS
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USEFUL MATERIAL DETAILS FROM M.A.,LEICESTER)

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+ (AN EARLIER VERSION WAS PUBLISHED IN 1968)

MATHEMATICS FOR THE CROSSING SUBJECT BOUNDAIRES
MAJORITY PROJECT
CHATTO AND WINDUS, 1974 ABJL
+

MATTHEWS, G (ED) MATHEMATICS THROUGH SCHOOL
MURRAY, 1972 1 BCEJLT
+ (MIS 1,7, LIVELY DESCRIPTIONS OF MATHEMATICS TEACHING AT VARIOUS LEVELS)

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CUP UCB
+ (G413, SMP HANDBOOK)

MAXWELL, E.A. FALLACIES IN MATHEMATICS.
CUP, 1959. 5 BELUVZ
+

MAXWELL, E.A. GEOMETRY FOR ADVANCED PUPILS.
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+ (CONTENT OLD, YET NICELY - DONE)

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CUP, 1960. 6,6 CUV
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CUP,1965. 3 BCLUV
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CUP, 1968. 3 ACUV
+ (INCLUDES EFFECT OF SIZE ON STRUCTURE IN ANIMALS;MECHANICS OF ANIMAL MOVEMENT;MODELS OF POPULATION GROWTH)

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+ (STATISTICS FOR GEOGRAPHERS, PP120)

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+ (USEFUL BACKGROUND IDEAS)

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+

MEYER, P.L. INTRODUCTORY PROBABILITY AND STATISTICAL APPLICATIONS.
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+ (PP381)

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+ (COLLECTION OF ORIGINAL SOURCES)

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+ (COMPREHENSIVE IN CONTENT, PRECISE IN DEFINITION)

MOAKES, A.J. NUMERICAL MATHEMATICS.
MACMILLAN, 1965. 1 CLMUV R
+ (FOR DESK CALCULATING MACHINES - BUT USEFUL NEVERTHELESS)

MOISE, EDWIN ELEMENTARY GEOMETRY FROM AN ADVANCED STANDPOINT.
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+ (SLOW CAREFUL ESTABLISHMENT OF THE FOUNDATIONS; 2ND YEAR UNIVERSITY LEVEL)

MONTGOMERY, S. & RALSTON, E. W. SELECTED PAPERS ON ALGEBRA.
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+ (G421,SELECTIONS FROM THE AMERICAN MATHEMATICAL MONTHLY,PP537)

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+

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+ (POPULAR APPROACH, GOOD AND CLEAR, HARD IN PARTS; SOME SECTIONS DATED

MOSTELLER, F. FIFTY CHALLENGING PROBLEMS IN PROBABILITY WITH SOLUTIONS.
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+ (WILL TEST OUT THE BEST A-LEVEL STUDENTS, PP88)

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+ (TITLES ARE DETECTING PATTERNS, EXPLORING DATA, FINDING MODELS, WEIGHING CHANCES; INTERESTING ANALYSES OF REAL LIFE SITUATIONS)

NAGEL, E. AND NEWMAN, J. R. GODEL'S PROOF.
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+ (DESCRIBES IN A READABLE WAY ONE OF THE MOST IMPORTANT DISCOVERIES IN THE FOUNDATIONS OF MATHEMATICS)

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3,
3,3
+ (INDISPENSABLE - A CLASSIC; SELECTIONS FROM A WIDE RANGE OF ORIGINAL SOURCES, WITH HISTORICAL COMMENTARY; VOL II OUT OF PRINT)

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NIVEN, I. & ZUCKERMAN, H.S. AN INTRODUCTION TO THE THEORY OF NUMBERS.
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NORMAC (B. S. PINFIELD, MANCHESTER EDUCATION COMMITTEE) 1 JLBTZ
+ (MIS 7,3, MT 89, PRIMARY BOOKS FOR REFERENCE, PP. 40 EACH. TITLES ARE RECEPTION, NUMBER 678, NUMBER FUN, NUMBER PATTERNS, INTRODUCTION TO MEASUREMENT FOR INFANTS, BRICKS BOXES AND CONTAINERS, POLYGONS AND POLYHEDRA, GEOBOARDS AND COORDINATES PRICE 30P OR 40P)

NORTHROP, E. P. RIDDLES IN MATHEMATICS.
PENGUIN. 1 BLMTUVZ *
+ (GOOD REFERENCE BOOK FOR PARADOXES; EXCELLENT DISCUSSION OF "EVERY TRIANGLE IS ISOSCELES")

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+ (G418. MATHEMATICS REQUIREMENTS OF CRAFT APPRENTICES, WITH DETAILED EXAMPLES OF USE. FOR EITB)

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CHAMBERS/MURRAY/WILEY, 1978 — 3 — JLETBP
+ (CONDENSED VERSION OF NUFFIELD GUIDES, COVERING THE 10-13 YEAR OLDS)

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CHAMBERS AND MURRAY, 1970. — BJPT
+ (CONDENSED VERSION OF NUFFIELD GUIDE)

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+

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+

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+

ORE O. — GRAPHS AND THEIR USES.
MATHEMATICAL ASSOCIATION OF AMERICA, 1963 — CLMUV
+

PAPY, G. — MODERN MATHEMATICS. VOLS I-VI
COLLIER-MACMILLAN. — 3 — LMTVB
+ (OF INTEREST TO SEE HOW ANOTHER COUNTRY DOES IT DIFFERENTLY; INTENDED FOR PUPILS THOUGH MANY WOULD FIND IT TAXING. A MODERN COURSE IN THE SPIRIT OF BOURBAKI)

PAPY, G. — GROUPS.
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+ (FORMAL BUT RICH FIRST COURSE ON GROUPS FOR UNIVERSITY)

PEDOE, D. — GEOMETRY AND THE LIBERAL ARTS.
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+ (G419,CLASSICAL MATERIAL, NICELY PRESENTED PP296)

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◆ (G397,CAREFUL AND THOROUGH SURVEY OF REAL GEOMETRY SOME DELIGHTFUL SECTIONS, PP 449)

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◆ (STILL ADMIRED, DESPITE ITS AGE)

POLYA, G. HOW TO SOLVE IT.
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◆ (HIS 1,7, A HEURISTIC APPROACH TO PROBLEM SOLVING, PP 240)

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◆ (A SEQUENCE OF PROBLEMS, WITH SOLUTIONS, IN SEVERAL AREAS OF UNIVERSITY MATHEMATICS)

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◆ (G419, PP234)

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◆

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+ (ENJOYABLE TO DIP INTO, PP204)

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METHUEN, 1963. 1 BLUV *O
+

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PENGUIN 2 BEJLMUV *
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M.I.T. PRESS, 1977 9 VCZ *
+ (PRESENTS NUMBER THEORY BY PROBLEMS)

ROGERSON, A.T., ET AL MODERN MATHEMATICS IN THE SCIENCE LESSON.
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+ (G419, MODERN MATHS RELEVANT TO SC. TCHG. PP. 39)

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+ (DISCURSIVE INTRODUCTION TO SYMMETRY FOR THE INTENDING PHYSICIST GROUP THEORY PRESENT BUT CAN BE OMITTED)

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ALLEN & UNWIN, 1960. BCUV
+

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+ (CLEAR, CONDENSED, VECTORS IN 3D)

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+ (UNDERGRADUATE LEVEL, COUNTING AS A NON-TRIVIAL EXERCISE)

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HARRAP, 1958. BHJLU O
+ (COVERS HISTORICAL FIELD AT ELEMENTARY LEVEL)

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+ (G424, SHOWS DEVELOPMENT OF FUNCTIONAL ANALYSIS FROM PROBLEMS IN NUMERICAL ANALYSIS, PP200)

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+ (LAYMAN'S GUIDE TO NOVEL MATHEMATICS E.G. NON-EUCLIDEAN GEOMETRY)

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+

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+

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+ (MIS 8,3)

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+ (G403, A VERY CLEAR ACCOUNT OF MATRICES AT UNIVERSITY LEVEL, PP. 304)

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+ (USEFUL REFERENCE)

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CUP 3 C
+

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SCHOOLS COUNCIL 1977 — BEU
+ (REPORT OF THE MATHEMATICS SYLLABUS STEERING GROUP)

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+ (MIS 7,2,EXCELLENT CASE STUDIES OF MIXED ABILITY TEACHING IN ACTION: DISCUSSION OF ISSUES AND PRACTICALITIES)

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HEINEMANN(1975-8) — 2,4 — ABUV *
+ (TITLES ARE LOGARITHMIC/EXPONENTIAL;CALCULUS APPLICABLE;ALGEBRA WITH APPLICATIONS PP178,132,256 RESPECTIVELY)

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+

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CUP — CU — 0
+

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+

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+ (ENCYCLOPAEDIA PP. 420)

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+

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+ (USEFUL FOR EDUCATIONAL STATISTICS)

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+ (EXCELLENT; BEAUTIFUL AND UNUSUAL BOOK OF PHOTOS AND DIAGRAMS)

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+ (G415,LAYMAN'S INTRODUCTION, CONTAINS A GOOD SURVEY OF ALGEBRAIC TOPOLOGY)

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+ (PARTS ARE ADVANCED,PP.233)

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+ (G406, PP. 195)

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+

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+ (INTERESTING SIDE-LIGHTS FROM A PRACTISING MATHEMATICIAN)

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+ (PP141)

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+ (A COLLECTION OF THE WRITINGS OF MARY BOOLE)

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+ (G418, SUITABLE NON-MATHEMATICAL TEAC LARGELY ABOUT SMP 1-5, PP182)

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+ (EXCELLENT BACKGROUND READER TO THE MANY APPLICATIONS OF STATISTICS, PP430)

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+ (G421, USES MODELLING IDEAS, VECTORS. SMG A LEVEL TEXT. PP. 356)

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